

REMARKS

Claims 1, 18 and 22 have been amended. Claims 1-22 remain for consideration. No new matter has been added.

1. The Examiner contends the present application is not entitled to priority dates of the German applications, from which the

2-5. Claims 1, 2 and 4-10 currently stand rejected for allegedly being obvious in view of the combined subject matter disclosed in U.S. Patent 6,469,785 to Duveneck et al. (hereinafter “Duveneck”) and U.S. Patent 4,621,059 to Rokugawa (hereinafter “Rokugawa”).

CLAIM 1

The combined teachings of Duveneck and Rokugawa fails to disclose “one of a biological cell metabolizing excitation source and a chemical cell metabolizing excitation source connected to the inlet and accepting a biological or chemical excitation medium that includes a luminophore, where the excitation medium influences the metabolism of the cell during excitation thereof by the medium, and where the luminophore reacts with a metabolic product of the cell during the excitation thereof to thereby provide the luminescence signal.” (cl. 1, emphasis added).

Duveneck teaches that “[t]he measuring method of the device... relies on the interaction of the evanescent light intensity with the sensor layer 8. The actual measurement can be carried out by radiating in the excitation light continuously, in continuous-wave (cw) operation, that is to say preferably with excitation at a light intensity that is constant with time. Alternatively, however, the measurement can be carried out by radiating in the

excitation light in the form of timed pulses... with which the luminescence can be detected in a time-resolved manner....” (col. 7, lines 56-67). Optical excitation of the luminescent radiation occurs via the evanescent field of the waveguide 6 (col. 7, line 14), which exists only in close proximity to the surface of the waveguide 6, and cooperates with a sensor layer 8 arranged on the waveguide. Therefore, the luminescent radiation is not excited chemically or biologically, but instead optically by excitation radiation 70 created by a semiconductor laser 10 and coupled into an optical waveguide.

A person skilled in the art would not combine the *vessel 2 with a luminescent substrate* in Rokugawa with the device in Duveneck, because in Duveneck the luminescent radiation is optically excited and therefore a luminescent substrate is not necessary. Additionally, no chemiluminescent radiation would be created with the addition of an enzyme in the Duveneck measuring chamber, even if the person skilled in the art would connect a vessel containing a luminescent substrate to the measuring chamber 68.

6. Claim 3 currently stands rejected for allegedly being obvious in view of the combined subject matter in Duveneck, Rokugawa and U.S. Patent 6,104,495 to Sieben et al. (hereinafter “Sieben”).

It is respectfully submitted that the rejection of this claim is moot, since claim 3 depends directly from amended claim 1, which is patentable for at least the reasons set forth above.

7. Claims 12 and 14 currently stand rejected for allegedly being obvious in view of the combined subject matter in Duveneck, Rokugawa and U.S. Published Application 2002/0182631 to Schurmann-Mader et al. (hereinafter “Schurmann-Mader”).

It is respectfully submitted that the rejection of these claims is moot, since each of claims 12 and 14 depends directly or indirectly from amended claim 1, which is patentable for at least the reasons set forth above.

In addition, Schurmann-Mader is not prior art for the reasons set forth below.

8. Claims 11 and 15 currently stand rejected for allegedly being obvious in view of the combined subject matter in Duveneck, Rokugawa and U.S. Patent 5,278,048 to Parce (hereinafter “Parce”).

It is respectfully submitted that the rejection of these claims is moot, since each of claims 11 and 15 depends directly or indirectly from amended claim 1, which is patentable for at least the reasons set forth above.

9. Claim 13 currently stands rejected for allegedly being obvious in view of the combined subject matter in Duveneck, Rokugawa, Schurmann-Mader and U.S. Patent 5,582,697 to Ikeda et al (hereinafter “Ikeda”).

It is respectfully submitted that the rejection of this claim is moot, since claim 13 depends indirectly from amended claim 1, which is patentable for at least the reasons set forth above.

In addition, Schurmann-Mader is not prior art for the reasons set forth below.

10. Claim 16 currently stand rejected under 35 USC 103(a) as being unpatentable over WO 2001/043875 to Schurmann-Mader et al (hereinafter “Schurmann-Mader”) in view of US Patent 4,385,113 to Chappelle (hereinafter “Chappelle”)

Schurmann-Mader is not prior art to the present application. The present application claims priority to two patent applications filed with the European Patent Office (“EPO”):

1. EPO Appl. No. 02006978.7, filed March 27, 2002; and
2. EPO Appl. No. 02016793.8, filed July 26, 2002.

Thus, the effective U.S. filing date for the current application is at least as early as July 26, 2002. The publication date of Schurmann-Mader is December 5, 2002. Thus, Schurmann-Mader does not qualify as either a 35 U.S.C. §102(a)/§103 or a 35 U.S.C. §102(b)/§103 reference.

The Examiner alleges that the filing date of the present application is March 14, 2005, and as a result Schurmann-Mader is prior art. However, since the present application is based upon a PCT application, March 14, 2005 is the 35 U.S.C. §371(c) date, NOT the effective priority date. The Official Filing receipt for this application clearly indicates that this application is a 371 of PCT/EP03/02252, which claims priority from the two EPO applications identified above.

Regarding the status of Schurmann-Mader as a 35 U.S.C. §102(e)/§103 reference, Schurmann-Mader was filed as an international PCT application on December 13, 2000. Thus, the current version of 35 U.S.C. §102(e) that went into effect on November 29, 2000 applies. That version of 35 U.S.C. §102(e) states that an international PCT application such as Schurmann-Mader “*shall have the effects for the purposes of this subsection of an*

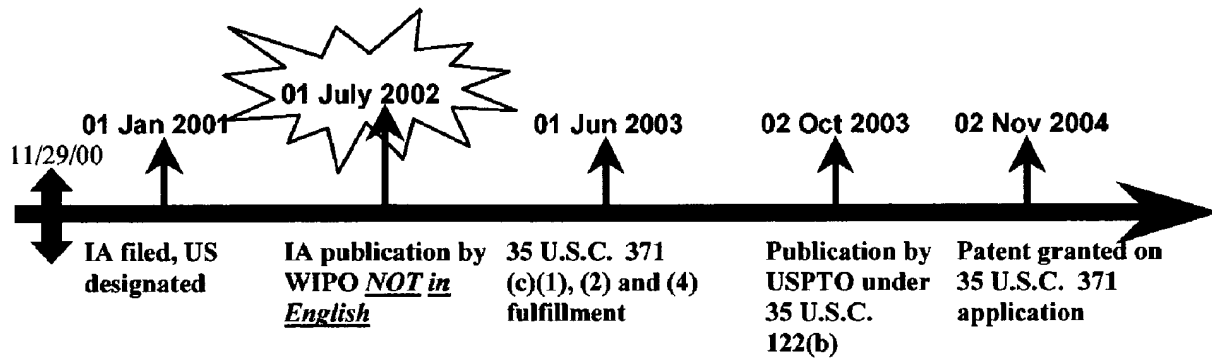
application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language”.

While the international PCT application version of Schurmann-Mader designated the United States, that version of Schurmann-Mader was not published in the English language but was instead published in the German language as document number WO 01/43875 A1. This document was cited in the “PCT International Preliminary Examination Report” dated April 2, 2004, an English language version of which was filed with the U.S. PTO on September 27, 2004, together with the instant application and other documents, including an Information Disclosure Statement which included the currently cited version of Schurmann-Mader, U.S. > Published Patent Application 2002/0182631 A1.

As further guidance in this issue, MPEP §706.02(f)(1) provides examination guidelines for applying references under 35 U.S.C. §102(e). Example 5, which is reproduced below, is clearly on point and demonstrates how a reference such as Schurmann-Mader cannot qualify as prior art under 35 U.S.C. §102(e).

“Example 5: References based on the national stage (35 U.S.C. 371) of an International Application filed on or after November 29, 2000 and which was not published in English under PCT Article 21(2). All references, whether the WIPO publication, the U.S. patent application publication or the U.S. patent, of an international application (IA) that was filed on or after November 29, 2000 but was not published in English under PCT Article 21(2) have no 35 U.S.C. 102 (e) prior art date at all. According to 35 U.S.C. 102 (e), no benefit of the international filing date (nor any U.S. filing dates prior to the IA) is given for 35 U.S.C. 102 (e) prior art purposes if the IA was published under PCT Article 21(2) in a language

other than English, regardless of whether the international application entered the national stage. Such references may be applied under 35 U.S.C. 102 (a) or (b) as of their publication dates, but never under 35 U.S.C. 102 (e).



The 35 U.S.C. 102(e)(1) date for the IA Publication by WIPO is: None. The 35 U.S.C. 102(e)(1) date for the Publication by USPTO is: None. The 35 U.S.C. 102(e)(2) date for the Patent is: None. The IA publication by WIPO can be applied under 35 U.S.C. 102 (a) or (b) as of its publication date (01 July 2002).” Thus, Schurmann-Mader also fails to qualify as a 35 U.S.C. §102(e)/§103 reference.

In light of the foregoing, because Schurmann-Mader fails to qualify as prior art, it cannot be combined with Chappelle to render claim 16 obvious. As such, it is respectfully submitted that the obviousness rejection of claim 16 is now moot and should be removed, and that claim 16 is in condition for allowance.

11. Claims 18, 19 and 22 currently stand rejected for allegedly being obvious in view of the combined subject matter disclosed in Duveneck and Sieben.

CLAIMS 18 & 22

Assuming without admitting that Duveneck and Sieben are properly combinable, neither discloses “one of a biological cell metabolizing excitation source and a chemical cell metabolizing excitation source that provides to the cavity via the inlet a biological or chemical excitation medium that includes a luminophore, where the excitation medium influences the metabolism of the cell during excitation thereof by the medium, and where the luminophore reacts with a metabolic product of the cell during the excitation thereof to provide luminescence detected by the detector.” (cl. 18, emphasis added).

Duveneck teaches that “[t]he measuring method of the device... relies on the interaction of the evanescent light intensity with the sensor layer 8. The actual measurement can be carried out by radiating in the excitation light continuously, in continuous-wave (cw) operation, that is to say preferably with excitation at a light intensity that is constant with time. Alternatively, however, the measurement can be carried out by radiating in the excitation light in the form of timed pulses... with which the luminescence can be detected in a time-resolved manner....” (col. 7, lines 56-67). Optical excitation of the luminescent radiation occurs via the evanescent field of the waveguide 6 (col. 7, line 14), which exists only in close proximity to the surface of the waveguide 6, and cooperates with a sensor layer 8 arranged on the waveguide. Therefore, the luminescent radiation is not excited chemically or biologically, but instead optically by excitation radiation 70 created by a semiconductor laser 10 and coupled into an optical waveguide.

The Examiner contends that the feature *“excitation medium influences the metabolism of the cell during excitation thereof by the medium, and where the luminophore reacts with a metabolic product of the cell during the excitation thereof to provide luminescence detected by the detector”* is an inherent use and is not being considered with respect to patentability. (see Official Action, pg. 14). It is respectfully submitted that the claim as a whole is not being considered when assessing patentability. Specifically, the claim language immediately prior to the language which the Examiner is not considering recites an *“excitation source that provides to the cavity via the inlet a biological or chemical excitation medium that includes a luminophore,”*. (cl. 18). This language clearly states that the excitation source provides an excitation medium, and thus language *“excitation medium influences the metabolism of the cell during excitation thereof by the medium, and where the luminophore reacts with a metabolic product of the cell during the excitation thereof to provide luminescence detected by the detector”* since the claimed device also includes the detector.

CLAIM 19

It is respectfully submitted that the rejection of this claim is moot, since claim 19 depends from amended claim 18, which is patentable for at least the reasons set forth above.

11. Claim 20 currently stands rejected in view of the combined teachings of Duveneck, Sieben and Rokugawa.

It is respectfully submitted that the rejection of this claim is moot, since claim 20 depends from amended claim 18, which is patentable for at least the reasons set forth above.

12. Claim 21 currently stands rejected in view of the combined teachings of Duveneck, Sieben and Schurmann-Mader.

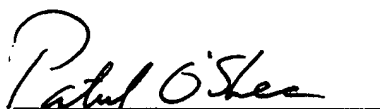
It is respectfully submitted that the rejection of this claim is moot, since claim 21 depends from amended claim 18, which is patentable for at least the reasons set forth above.

In addition, as set forth above Schurmann-Mader is not prior art.

For all the foregoing reasons, reconsideration and allowance of claims 1-22 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,

A handwritten signature in cursive script, reading "Patrick O'Shea", is written over a horizontal line.

Patrick J. O'Shea
Reg. No. 35,305
O'Shea Getz P.C.
1500 Main Street, Suite 912
Springfield, MA 01115
(413) 731-3100, Ext. 102